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IN THE UNITED STATES DESIGNATED/ELECTED OFFICE  
OF THE UNITED STATES PATENT AND TRADEMARK OFFICE  
UNDER THE PATENT COOPERATION TREATY - CHAPTER II

**INFORMATION DISCLOSURE STATEMENT**  
**ACCOMPANYING THE FILING OF AN APPLICATION**

APPLICANT(S): JÖRG HEUER ET AL.  
ATTORNEY DOCKET NO: P00,1967  
INTERNATIONAL APPLICATION NO: PCT/DE99/01969  
INTERNATIONAL FILING DATE: 01 JULY 1999  
INVENTION: METHOD AND ARRANGEMENT FOR  
DETERMINING A MOVEMENT WHICH  
UNDERLIES A DIGITIZED IMAGE

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

Applicant requests that citation and examination of the following documents  
be made during the course of examination of the above-referenced application for  
United States Letters Patent:

AA	US	5,764,803	09 JUN 1998
AJ	EP	0 449 283	02 OCT 1991
AK	EP	0 684 736	29 NOV 1995
AL	GB	2 277 002	12 OCT 1994
AM	GB	2 308 774	02 JUL 1997
AQ	ITU-T RECOMMENDATION H.263; "Transmission of Non-Telephone Signals—Video Coding For Low Bit Rate Communication"; 03/96.		

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- AR MECH, R., et al.; "A Noise Robust Method For 2D Shape Estimation of Moving Objects in Video Sequences Considering A Moving Camera"; Institut für Theoretische Nachrichtentechnik und Informationsverarbeitung Universität Hannover, Appelstraße 9A, D - 30167 Hannover, FRG.
- AS BIERLING, M.; "Displacement Estimation by Hierarchical Blockmatching", Institut für Theoretische Nachrichtentechnik und Informationsverarbeitung Universität Hannover, Appelstraße 9A, D-3000 Hannover 1, FR of Germany; SPIE Vol. 1001 Visual Communications and Image Processing '88; pp. 942-951.
- AT NERI, A., et al.; "Adaptive Segmentation of Moving Object versus Background for Video Coding", Electronic Engineering Department, University of Rome III, Via Vasca Navale 84, 00146 Rome, IT; SPIE Vol. 3164, pp. 443 - 453.
- AU BEAUCHEMIN, S.S., et al.: "The Computation of Optical Flow", Dept. of Computer Science, University of Western Ontario, London, Ontario, CA; ACM Computing Surveys, Vol. 27, No. 3, pp. 443 - 467; 1995.
- AV YOO, K.Y., et al.: "An Efficient Coding Method for the Local Motion Vector by Using Global Motion", Dept. of Electrical Engineering, KAIST; IEEE Transactions on Consumer Electronics, Vol. 44, No. 2,

pp. 312 - 316, May 1998.

### **EXPLANATION OF RELEVANCE**

Reference AA is directed to motion-adaptive modelling of scene content for very low bit rate model-assisted coding of video sequences.

Reference AJ is directed to an image sensing apparatus having camera-shake detection function.

Reference AK is directed to model-assisted coding of video sequences at low bit rates.

Reference AL is directed to selection of global motion vectors for video signal processing.

Reference AM concerns the selection of motion vectors, particularly global motion vectors, in video signal processing.

Reference AQ is a recommendation specifying a coded representation that can be used for compressing motion picture component and audio-visual services at low bit rates.

Reference AR is directed to an algorithm for automatic, noise robust 2D shape estimation of moving objects in video sequences considering a moving camera.

Reference AS concerns a hierarchical blockmaking algorithm for the estimation of displacement vector fields in digital television sequences.

Reference AT concerns a segmentation method aimed at separating moving objects from the background in a generic video sequence by means of a higher order statistics significance test performed on a group of inter-frame differences.

Reference AU concerns two-dimensional image motion projection of a three-dimensional motion of objects, relative to a visual sensor onto its image plane.

Reference AV discloses a fast local-motion estimation method for a two-stage estimation algorithm of global and local motions.

None of these references disclose or suggest a method and arrangement for determining movement underlying a digitized image as disclosed and claimed in the present application.

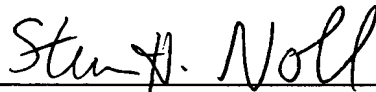
A copy of each reference, along with a completed Form PTO 1449, is submitted herewith.

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This Information Disclosure Statement is being submitted together with the original application papers, thus no fee payment is required.

All claims of the application are submitted to be patentable over the teachings of the cited reference, taken singularly or in any reasonable combination. Therefore, early and favorable consideration of the application is respectfully requested.

Respectfully submitted,



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